

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A data recording method, comprising:

modulating input data for each of a predetermined unit;

selecting predetermined connection bits that are placed between two sequences of modulated data, each sequence corresponding to the predetermined unit, ~~so that causing~~ the absolute value of a DSV ~~increases to~~ increase in only a predetermined region of a disc; and

recording the modulated data for each predetermined unit and the selected connection bits to the disc;

~~wherein~~ the disc ~~[[has]]~~ having a recording area including a synchronous signal area and a data area, and said predetermined region is the data area; and

determining if the disc is an original disc or a copied disc, the presence of the increased DSV in the region indicating that the disc is original, the absence of the increased DSV indicating that the disc is a copy of the original.

Claim 2 (Previously Presented): The data recording method as set forth in Claim 1, wherein the selecting is performed by selecting connection bits from a plurality of patterns of connection bits so that the absolute value of the DSV increases.

Claim 3 (Previously Presented): The data recording method as set forth in Claim 1, wherein the selecting is performed by selecting a predetermined code conversion table from a plurality of different code conversion tables so that the absolute value of the DSV increases and selecting connection bits in accordance with the selected code conversion table.

Claim 4 (Original): The data recording method as set forth in Claim 1,

wherein the predetermined region is an area for copy protection or security of a recording medium.

Claim 5 (Original): The data recording method as set forth in Claim 1, wherein when the absolute value of the DSV increases, data that is reproduced is prevented from being normally read.

Claim 6 (Original): The data recording method as set forth in Claim 1, wherein an error of the data causes the value of the data to vary whenever it is read.

Claim 7 (Previously Presented): The data recording method as set forth in Claim 1, wherein the selecting is performed by designating an initial value for the DSV with an offset in only the predetermined region and selecting the connection bits so that the absolute value of the DSV increases.

Claim 8 (Previously Presented): The data recording method as set forth in Claim 7, wherein the selecting is performed by designating an initial value for the DSV with an offset in only the predetermined region and selecting the connection bits so that the absolute value of the initial value decreases.

Claim 9 (Original): The data recording method as set forth in Claim 8, wherein the offset is applied every  $n$  predetermined units, where  $n$  is any natural number.

Claim 10 (Original): The data recording method as set forth in Claim 9,

wherein the offset is applied for each frame composed of a plurality of predetermined units of modulated data.

Claim 11 (Cancelled).

Claim 12 (Previously Presented): The data recording method as set forth in Claim 8, wherein when the data area includes a sub code recording area, the offset is applied for other than the sample code recording area.

Claim 13 (Currently Amended): A data recording apparatus, comprising:  
modulating means for modulating input data for each predetermined unit and selecting predetermined connection bits placed between two sequences of modulated data, each sequence corresponding to the predetermined unit;  
recording means for recording the modulated data for each predetermined unit and the predetermined connection bits; and  
controlling means for causing the modulating means to select connection bits so that the absolute value of the DSV increases in a predetermined region of a disc so that the region is not reproduceable, wherein the disc [[has]] having a recording area including a synchronous signal area and a data area, and said predetermined region is the data area determining if the disc is an original disc or a copied disc, the presence of the increased DSV in the region indicating that the disc is original, the absence of the increased DSV indicating that the disc is a copy of the original.

Claim 14 (Original): The data recording apparatus as set forth in Claim 13,

wherein the controlling means is configured to select connection bits from a plurality of patterns of connection bits so that the absolute value of the DSV increases.

Claim 15 (Original): The data recording apparatus as set forth in Claim 13, wherein the modulating means has a plurality of different code conversion tables, and wherein the controlling means is configured to select a code conversion table from the plurality of different code conversion tables so that the absolute value of the DSV increases and selecting connection bits in accordance with the selected code conversion table.

Claim 16 (Original): The data recording apparatus as set forth in Claim 13, wherein the controlling means is configured to designate an initial value for the DSV with an offset in only the predetermined region and select connection bits so that the absolute value of the DSV increases.

Claim 17 (Original): The data recording apparatus as set forth in Claim 16, wherein the controlling means is configured to designate an initial value for the DSV with an offset in only the predetermined region and select connection bits so that the absolute value of the DSV decreases.

Claim 18 (Currently Amended): A recording medium, comprising:  
~~on which~~ a plurality of predetermined units of modulated data and connection bits ~~on which~~ thereon recorded, the connection bits being placed between two sequences of modulated data, each sequence corresponding to the predetermined unit, the connection bits being recorded in a predetermined region of a disc, so that the absolute value of a DSV increases so that the region is not reproduceable, ~~wherein~~ the disc ~~has~~ having a recording

area including a synchronous signal area and a data area, and said predetermined region is the data area, the presence of the increased DSV in the region indicating that the disc is original, the absence of the increased DSV indicating that the disc is a copy of the original.

Claim 19 (Original): The recording medium as set forth in Claim 18,  
wherein the predetermined region is an area for copy protection or security.

Claim 20 (Cancelled).

Claim 21 (Previously Presented): The recording medium as set forth in Claim 18,  
wherein the data area has a sub code recording area, and  
wherein the connection bits are recorded in other than the sub code recording area of  
the data area so that the absolute value of the DSV increases.

Claim 22 (Currently Amended): A data reproducing method, comprising:  
reproducing data from a recording medium on which a plurality of predetermined  
units of modulated data and connection bits are recorded, the connection bits being placed  
between two sequences of modulated data, each sequences corresponding to the  
predetermined unit, the connection bits being recorded in a predetermined region of a disc, so  
that the absolute value of a DSV increases so that the region is not reproduceable the disc  
having a recording area including a synchronous signal area and a data area, and said  
predetermined region is the data area; [[and]]

detecting a reproduction state from the reproduced data; and  
determining if the disc is an original disc or a copied disc, the presence of the  
increased DSV in the region indicating that the disc is original, the absence of the increased

DSV indicating that the disc is a copy of the original.

Claim 23 (Previously Presented): The data reproducing method as set forth in Claim 22, further comprising:

determining whether or not the recording medium is an original recording medium in accordance with the reproduction state.

Claim 24 (Previously Presented): The data reproducing method as set forth in Claim 22, further comprising:

determining whether or not data can be reproduced in accordance with the reproduction state.

Claim 25 (Previously Presented): The data reproducing method as set forth in Claim 21, further comprising:

detecting an error state of data in accordance with the reproduction state.

Claim 26 (Previously Presented): The data reproducing method as set forth in Claim 21, further comprising:

determining whether or not data accessed a plurality of times and obtained is the same in accordance with the reproduction state.

Claim 27 (Previously Presented): The data reproducing method as set forth in Claim 21,

wherein the predetermined region is an area for copy protection or security, and

wherein the data reproducing method further comprises:

causing reproducing means to access the predetermined region.

Claim 28 (Previously Presented): The data reproducing method as set forth in Claim 22, further comprising:

prohibiting data from being reproduced when the detected result at the detecting step represents that the recording medium is a copied recording medium.

Claim 29 (Previously Presented): The data reproducing method as set forth in Claim 22, further comprising:

generating an alarm that represents that data is reproduced from a copied recording medium when the detected result at the detecting step represents that the recording medium is a copied recording medium.

Claim 30 (Currently Amended): A data reproducing apparatus, comprising:  
reproducing means for reproducing data from a recording medium on which a plurality of predetermined units of modulated data and connection bits are recorded, the connection bits being placed between two sequences of modulated data, each sequences corresponding to the predetermined unit, the connection bits being recorded in a predetermined region of a disc, so that the absolute value of a DSV increases so that the region is not reproduceable the disc having a recording area including a synchronous signal area and a data area, and said predetermined region is the data area; [[and]]

controlling means for causing the reproducing means to reproduce the predetermined region and detect a reproduction state of the reproduced data; and

determining if the disc is an original disc or a copied disc, the presence of the increased DSV in the region indicating that the disc is original, the absence of the increased

DSV indicating that the disc is a copy of the original.

Claim 31 (Previously Presented): The data reproducing apparatus as set forth in Claim 30, wherein the controlling means determines whether or not the recording medium is an original recording medium in accordance with the reproduction state.

Claim 32 (Previously Presented): The data reproducing apparatus as set forth in Claim 30, wherein the controlling means determines whether or not data can be reproduced in accordance with the reproduction state.

Claim 33 (Previously Presented): The data reproducing apparatus as set forth in Claim 30, wherein the controlling means detects an error state of data in accordance with the reproduction state.

Claim 34 (Previously Presented): The data reproducing apparatus as set forth in Claim 30, wherein the controlling means determines whether or not data accessed a plurality of times and obtained is the same in accordance with the reproduction state.

Claim 35 (Previously Presented): The data reproducing apparatus as set forth in Claim 30, wherein the predetermined region is an area for copy protection or security, and wherein the controlling means causes the reproducing means to access the predetermined region.

Claim 36 (Previously Presented): The data reproducing apparatus as set forth in Claim 35,



wherein the controlling means prohibits data from being reproduced when the controlling means has determined that the recording medium is a copied recording medium.

Claim 37 (Previously Presented): The data reproducing apparatus as set forth in Claim 36, further comprising:

alarm generating means for generating an alarm,

wherein the controlling means controls the alarm generating means to generate an alarm that represents that data is reproduced from a copied recording medium when the controlling means has determined that the recording medium is a copied recording medium.

Claim 38 (Previously Presented): The data reproducing apparatus of Claim 35, wherein the predetermined region includes an encryption key.

Claim 39 (Previously Presented): The data reproducing apparatus of Claim 27, wherein the predetermined region includes an encryption key.

Claim 40 (Previously Presented): The data reproducing apparatus of Claim 19, wherein the predetermined region includes an encryption key.

Claim 41 (Previously Presented): The data reproducing apparatus of Claim 4, wherein the predetermined region includes an encryption key.